BID OPENING

CITY OF SAN JOSE
OFFICE OF THE CITY CLERK

RECEIVED
San Jose City Clerk

City Clerk Time Stamp 2010 MAY 13 P 2:56

TOTAL BASE BID 8,929,000

ALT NO. 1 _____

ALT NO. 2 _____

ALT NO. 3 _____

Alt No. 4 _____

Alt No. 5 _____

BID DATE: Thursday, May 13, 2010

Project Manager: Amit Mutsuddy ~ 945.5166

SJ/SC WPCP Switchgear M1, M2 & M3
Replacement Design-Build Project
FY 2009-2010

BIDDER'S NAME: Monterey Mechanical

Bond ✓ **Cashier's Check** _____

Addendums Included ( ) 1, 2, 3 **YES** ✓ **NO** _____

Non-Collusion Affidavit **YES** ✓ **NO** _____

PROPOSAL TO CITY OF SAN JOSE

FOR

SWITCHGEARS M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT

Name of Bidder: Monterey Mechanical Co.

The representations herein are made under penalty of perjury.

To: The City of San Jose, State of California

The undersigned, as bidder, declares that the only person or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any other person, firm or corporation; that the bidder has thoroughly read and examined and has full knowledge of and understands all the provisions and contents of this proposal and the documents which must be attached hereto, the Plans approved by the Director of Environmental Services on **April 9, 2010,** entitled **Switchgears M1, M2 & M3 Replacement Design-Build Project** and the Specifications approved by the Director of Environmental Services on **April 9, 2010,** entitled **Switchgears M1, M2 & M3 Replacement Design-Build Project** on file in the office of the Director of Environmental Services of the City of San Jose in City Hall, San Jose, California; that the bidder has thoroughly examined said Plans and Specifications which are on file in the office of the Director of Environmental Services, and that the bidder has full knowledge of and understands said Plans and Specifications and the requirements thereof; and that the bidder has further read and understands, and has knowledge of the contents of any and all addenda to said Plans and Specifications on file; and that the bidder proposes and agrees, if this proposal is accepted, that the bidder will contract with the City of San Jose, in the form of the copy of the contract on file in the office of the Director of Environmental Services, to do all the work and furnish all materials specified or referred to in the contract, in the manner and time therein prescribed, and according to the requirements of the City or Director of Environmental Services as therein set forth, to furnish the contract, bonds and insurance specified in the Specifications, and to do all other things required of the Contractor by the contract; and will take in full payment therefor the following price or unit prices as shown in the Schedule of Quantities on the next page(s).

If the bidder or other interested persons is a corporation, state legal name of corporation, also names of the President, Secretary, Treasurer, and the Manager thereof; if a partnership, state the name of the partnership, if one exists, also the names of all the partners comprising the partnership; if any of the partners are individuals, state the first and last name of every individual in full, if any of the partners are corporations, state for each such corporation, the information required above of corporations; if any of the partners are partnerships, state for each such partnership the information required above of partners; if the bidder or other interested person is a joint-venture, state the name of the joint venture, also names of all joint venturers comprising the joint venture; if any of the joint venturers are individuals, state the first and last name of every individual comprising the joint venture; if any of the joint venturers are corporations, state for each corporation the information required above of corporations; if any of the joint venturers are partnerships, state for each such partnership, the information required above of partners; if bidder or other interested persons is an individual, state first and last names in full.

If bidder is an individual, the bidder's signature shall be placed below; if bidder is an individual, doing business under a fictitious name, the name of the individual followed by the words "doing business under (insert the fictitious name)" shall be set forth above, together with the signature of the individual; if bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officer or officers of the corporation, authorized to sign contracts on behalf of the corporation, the corporate title; that is Vice-President, Secretary, etc., should be placed below the name of the officer and the corporate seal affixed; if bidder is a partnership, the legal name of the partnership, if one exists, shall be set forth above, together with the signature of the partner or partners authorize to sign contracts on behalf of the partnership; if any of the partners are corporations, execution for such partners shall be accomplished

SCHEDULE OF QUANTITIES

for

San Jose/Santa Clara Water Pollution Control Plant
Switchgears M1, M2 & M3 Replacement Design-Build Project
FY 2009-10 Capital Improvement Program

Bid				
Item	Description	Estimated Quantity	Unit Price (In Figures)	Item Price (In Figures)
1	Design and Construction of Switchgears M1, M2 & M3 Replacement	Lump Sum	N/A	8,929,000

Total Lump Sum Bid Amount in Figures 8,929,000

Total Lump Sum Bid Amount in Words EIGHT MILLION, NINE HUNDRED TWENTY-NINE THOUSAND, DOLLARS

Basis of bid evaluation: See Section 3-1.01 of the Special Provisions. The bid shall include all Federal, State, and other taxes, and shall be firm for a period of 120 days after bid opening. All bid items must be filled in completely.

Milton C. Burleson, President & CEO
Paul Moreira, Sec.,Treas.& CFO
James D. Troup,V.P/Mgr

BIDDER: Monterey Mechanical Co.
Company

Milton C Burleson
Signature Milton C. Burleson, President & CEO

in accordance with the requirements set forth above for corporations; if any of the partners are partnerships, execution for such partners shall be accomplished in accordance with the requirements set forth above for partnership; if bidder is a joint-venture, the legal name of the joint venture, if one exists, shall be set forth above for partnerships. If signature is by an agent other than an officer of a corporation, or member of a partnership or a joint venture, a Power of Attorney must be on file with the City Clerk prior to opening bids or submitted with the bid; otherwise, the bid may, at the City's option, be disregarded as non-responsive.

If this proposal shall be accepted and the undersigned shall fail to contract, and to give the Contractor's Bond For Faithful Performance and the Contractor's Payment Bond required by the specifications and contract and by law, and to provide all insurance as required by said contract, within eight (8) days after the bidder has received notice from the City of San Jose, the City may, at its option, determine that the bidder has abandoned his/her contract, and thereupon this proposal and the acceptance thereof shall be null and void, and the forfeiture of such security accompanying this proposal shall operate and the same shall be the property of the City of San Jose.

In accordance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding on contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board. Signing this Proposal on the signature portion thereof shall constitute signature of this Statement.

Accompanying this proposal are the following documents completely filled in by the bidder and the same are incorporated herein by reference;

1. Cash, a cashier's check or a certified check made payable to City, or a bidder's bond executed by an admitted surety insurer naming the City as beneficiary, in an amount equal to at least ten percent (10%) of the total amount bid including all alternatives.

2. A "List of Subcontractors".

3. A "Statement of Qualifications".

City may at its option, request additional supplemental information after bid opening.

Bidder understands that the City reserves the right to reject any or all bids and to waive any informalities in the bidding.

The undersigned, as bidder, declares that in listing subcontractors in this bid, I have not discriminated or given any preference to any firm based on race, sex, color, age, religion, sexual orientation, actual or perceived gender identity, disability, ethnicity, or national origin. I understand that any such discrimination or preference is in violation of Chapter 4.08 of the Municipal Code.

Execution of the Non-Collusion Affidavit constitutes execution of this Bid Proposal including the above statement of nondiscrimination and, with the exception of the Bidder's Bond or Addenda, if any, no other signatures will be required.

NONCOLLUSION AFFIDAVIT

Project Title: **Switchgears M1, M2 & M3 Replacement Design-Build Project**

Milton C. Burleson, being first duly sworn, deposes and says that he/she is
(print name)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof the effectuate a collusive or sham bid.

In accordance with Title 23, United States Code, Section 112, the bidder hereby states, under penalty of perjury, that he/she has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this contract. Bidders are cautioned that making a false certification may subject certifier to criminal prosecution.

The undersigned declares under penalty of perjury that the information contained in this proposal and all accompanying documents are true and correct.

Executed on May 13, 2010

Monterey Mechanical Co.
Legal Company Name

Corporation
Indicate Type of Entity: Sole Proprietorship, Partnership (General/Limited Partners), Corporation, Joint Venture, etc.

By: Milton C Burleson

Title: Milton C. Burleson, President & CEO

City Business Lic. No.: _____
Expiration Date: _____
State Contractor Lic. No.: 388361
Classification: A,B,C4,C12,C16,C20,C36,C42,C43
Expiration Date: 3/31/12
Federal I. D. No.: 94-2614825
Address: 8275 San Leandro Street
Oakland, CA 94621

Telephone: 510-632-3173

****

NOTARY

On _____ before me, _____, personally appeared
(name and title of officer)

_____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under the PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Seal)

Notary Public

See Attached California All-Purpose Acknowledgment

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Alameda

On 5/13/10 (Date) before me, Debra Paraiso, Notary Public (Here Insert Name and Title of the Officer),

personally appeared Milton C. Burleson (Name(s) of Signer(s))

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he/she/they~~ executed the same in ~~his/her/their~~ authorized capacity(~~ies~~), and that by ~~his/her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

DEBRA PARAISO
Commission # 1701751
Notary Public - California
Alameda County
My Comm. Expires Oct 29, 2010

Place Notary Seal Above

Signature _____ (Signature of Notary Public)

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name: _____

☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

BIDDER'S BOND

KNOW ALL PERSONS BY THESE PRESENTS:

That we, Monterey Mechanical Co. as PRINCIPAL, and Safeco Insurance Company of America, a corporation duly organized under the laws of the State of Washington and duly licensed to become sole surety on bonds required or authorized by the State of California, as SURETY, are held and firmly bound unto the City of San Jose (hereinafter called the "City"), in the penal sum of TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the City of San Jose, for the work described below; for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the Surety hereunder exceed the sum of ten percent of the bid amount- DOLLARS ($ 10%--).

THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas the Principal has submitted the above mentioned bid to the City of San Jose, for certain construction specifically described as follows, for which bids are to be opened in the Office of the City Clerk, City of San Jose, City Hall, 200 E. Santa Clara St., Wing 2nd Fl., San Jose, CA 95113, on **May 13, 2010** for **Switchgears M1, M2 & M3 Replacement Design-Build Project.**

NOW, THEREFORE, if the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented to Principal for signature, enters into a written contract, in the prescribed forms, in accordance with the bid, and files a Faithful Performance Bond and a Contractor's Payment Bond, and files the required insurance policies with the City, all as required by the specifications and the contract or by law, then the obligation shall be null and void; otherwise it shall be and remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that the obligation of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

In the event suit is brought upon this bond by the Obligee and judgement is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this 11th day of May, 2010.

PRINCIPAL	SURETY
Monterey Mechanical Co. Legal Company Name	Safeco Insurance Company of America Legal Company Name
Corporation Indicate Type of Entity	
By Milton C Burleson Title: Milton C. Burleson President & CEO	By Danijela L. Mosunic Title: Danijela L. Mosunic Attorney-In-Fact
By _____ Title:	By _____ Title:

(Affix Corporate Seals)

(Attach Acknowledgments of both Principal and Surety signatures)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Santa Clara

On May 11, 2010 (Date) before me, Sarah M. Lorincz, Notary Public (Here Insert Name and Title of the Officer),

personally appeared Danijela L. Mosunic (Name(s) of Signer(s))

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Signature of Notary Public)

SARAH M. LORINCZ
Commission # 1805285
Notary Public - California
Santa Clara County
My Comm. Expires Jul 1, 2012

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name: _____

☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Liberty Mutual.

POWER OF ATTORNEY

Safeco Insurance Company of America
General Insurance Company of America
1001 4th Avenue
Suite 1700
Seattle, WA 98154

No. 12829

KNOW ALL BY THESE PRESENTS:

That **SAFECO INSURANCE COMPANY OF AMERICA** and **GENERAL INSURANCE COMPANY OF AMERICA**, each a Washington corporation, does each hereby appoint

**********RONALD G. SPENO; FRANCIS E. COOK; CHARLES M. GRISWOLD; DANIJELA L. MOSUNIC; VINCE SCOLARI; San Jose, California**********

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, SAFECO INSURANCE COMPANY OF AMERICA and GENERAL INSURANCE COMPANY OF AMERICA have each executed and attested these presents

this 21st day of March, 2009.

Dexter R. Legg — **Dexter R. Legg, Secretary**

T A Mikolajewski — **Timothy A. Mikolajewski, Vice President**

CERTIFICATE

Extract from the By-Laws of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA:**

"Article V, Section 13. - FIDELITY AND SURETY BONDS ... the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business... On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA** adopted July 28, 1970.

"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,

(i) The provisions of Article V, Section 13 of the By-Laws, and
(ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
(iii) Certifying that said power-of-attorney appointment is in full force and effect,

the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, Dexter R. Legg, Secretary of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA**, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this 11th day of May, 2010.

SAFECO INSURANCE COMPANY OF AMERICA CORPORATE SEAL 1953 STATE OF WASHINGTON

GENERAL INSURANCE COMPANY OF AMERICA CORPORATE SEAL 1923 State of Washington

Dexter R. Legg

Dexter R. Legg, Secretary

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Alameda

On 5/13/10 (Date) before me, Debra Paraiso, Notary Public (Here Insert Name and Title of the Officer),

personally appeared Milton C. Burleson (Name(s) of Signer(s)),

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he/she/they~~ executed the same in ~~his/her/their~~ authorized capacity(~~ies~~), and that by ~~his/her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

DEBRA PARAISO
Commission # 1701751
Notary Public - California
Alameda County
My Comm. Expires Oct 29, 2010

Place Notary Seal Above

Signature _____ (Signature of Notary Public)

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____

Signer Is Representing: _____

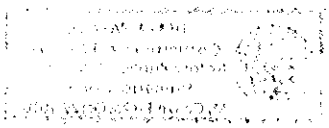
RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name: _____

☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here



LIST OF SUBCONTRACTORS

Designation of Subcontractors as required in Section 2-1.15A of the City of San Jose Standard Specifications, July 1992.

NAME OF SUBCONTRACTOR	LOCATION OF PLACE OF BUSINESS	PORTION (DESCRIPTION) OF WORK

LIST OF SUBCONTRACTORS

Designation of Subcontractors as required in Section 2-1.15A of the City of San Jose Standard Specifications, July 1992.

NAME OF SUBCONTRACTOR	LOCATION OF PLACE OF BUSINESS	PORTION (DESCRIPTION) OF WORK
HGH ELECTRIC INC.	OAKLAND, CA	ELECTRICAL
R+W CONCRETE	BURLINGAME, CA	CONCRETE

5/1/ SUB

STATEMENT OF QUALIFICATIONS
FOR
SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT
SWITCHGEARS M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT
FY 2009/2010

Bidders shall identify a minimum of three (3) similar projects within the last five (5) years. Bidders must use and submit this form as a part of their bid proposal. Bidders who wish to identify more than five (5) projects may attach additional pages as necessary to this form. Please note that resumes and/or reference lists may not be submitted in lieu of this form.

All work experience identified in this STATEMENT OF QUALIFICATIONS form must have been completed by the same contractor who is submitting the bid proposal.

PROJECT NO. 1	Date Started	Date Ended	Owner Name and Address	Name and Telephone No. of Person with Personal Knowledge of Bidder's Work on the Project (e.g. Project Manager)
North Point Wet Weather Imprv	6/2005	4/2007	San Francisco Public Utilities Commission 1145 Market Street San Francisco, CA	Gordon King 415-559-2170

PROJECT NO. 2	Date Started	Date Ended	Owner Name and Address	Name and Telephone No. of Person with Personal Knowledge of Bidder's Work on the Project (e.g. Project Manager)
Oceanside WPC & Westside Pump Sta Barscreen & VFD Imprv	9/2006	12/2007	San Francisco Public Utilities Commission 1145 Market Street San Francisco, CA	Boon Lim 415-554-0745

PROJECT NO. 3	Date Started	Date Ended	Owner Name and Address	Name and Telephone No. of Person with Personal Knowledge of Bidder's Work on the Project (e.g. Project Manager)
MWWTP Digester Upgrade	6/2005	6/2008	East Bay Municipal Utility District 2020 Wake Ave. Oakland, CA	Don Kiang 510-287-1686
PROJECT NO. 4 Channel Pump Station Odor Control & Facility Imprv	7/2008	Current	San Francisco Public Utilities Commissio 1145 Market Street San Francisco, CA	Gordon King 415-559-2170

Each of the above referenced projects had substantial work involving the repalcement of existing motor control centers and plant switchgear. The electrical subcontractor on each of the projects was HGH Electric, Oakland, CA and the electrical equipment was furnished by KBL Associates. HGH and KBL will be subcontractors/suppliers as part of the Monterey team for this project.

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Environmental Services Department
SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT

April 26, 2010

ADDENDUM NO. 1
TO
THE PLANS AND SPECIFICATIONS
FOR
SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT

Notice is hereby given that the following revisions, additions and/or deletions are hereby made of, and incorporated into the Plans and Specifications for the SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT

IMPORTANT

THIS ADDENDUM MUST BE ACKNOWLEDGED WHEN YOUR BID IS SUBMITTED. FAILURE TO ACKNOWLEDGE THE ADDENDUM MAY CONSTITUTE GROUNDS FOR REJECTION OF THE BID.

INSTRUCTIONS:

This Addendum No. 1, pages 1 through 5, and attachments modifies the Bidding Documents for the SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT, and shall become part of the Contract Documents for this Project.

The Contract Time is not changed

Submit this Addendum #1 package with your bid proposal.
The bidder must sign this addendum in the space provided below and return one signed copy with the bid. Failure to return the signed copy with the bid document shall not relieve the bidder of the obligation to include this addendum in the bid proposal.

Monterey Mechanical Co.
Bidder's Name

Milton C. Burleson
President & CEO
Signature and Title of Bidder

5/13/10
Date

Approved by:

for **Bhavani Yerrapotu, P.E.**
Division Manager, Technical Support Services
SJ/SC Water Pollution Control Plant

THIS ADDENDUM CONTAINS FIVE (5) PAGES
PLUS ATTACHMENTS SIXTEEN (16) PAGES

ADDENDUM NO. 1

TO

PLANS AND SPECIFICATIONS

FOR

SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT

April 26, 2010

SPECIFICATIONS

SECTION 16121 – MEDIUM VOLTAGE CABLES

1. Replace existing section with attached specification section 16121, pages 16121-1 to 16121-16.

REQUESTS FOR INFORMATION

2. **Question:** Drawing C-101, Demo Keynote 1 and Utility Keynote 1 show the removal and relocation of 1.5" conduits. Are these notes intended to reference 2ea – 1.5" conduits or 2ea ductbanks containing 1.5" conduits? What are the sizes and quantities of conductors in these conduits?

   Answer: *On drawing C-101, the Demo Keynote 1 and the Utility Keynote 1 are for a total of three (3) 1.5" conduits. Each conduit will have 3-#2AWG and 1-#8 (G) copper conductors.*

   Also, on drawing C-101, the existing conduit for Demo Keynote 8 (circuit to MH-21 sump pump) has 4-#10AWG copper conductors.

3. **Question:** For the conduits mentioned in Question #1 above, it is assumed that new wire will need to be pulled through the relocated conduits. Does the entire circuit need to be replaced or can the wires be spliced at the nearest pull box? Where is the location of the nearest pull box and/or the origins of the existing conduits to be relocated?

   Answer: *Add new Christy electrical boxes at each of the three transition points to splice into the existing circuits.*

4. **Question:** The conduit and cable schedule does not identify ground cables sizes for the new conductors to be pulled. Should the engineer size the equipment ground conductors for the full amperage rating of the breakers shown on drawing E-106? If so, please identify the ratings for the existing circuit breakers in Switchgear M4.

   Answer: *For new circuits with 350 kmcil feeder cables and above, the size of the ground cable will be (1) #4/0 AWG ground cable per conduit. For new circuits with #4/0 AWG feeder cables, the ground cable will have be (1) #1/0 AWG ground cable per conduit run.*

   The circuit breaker sizes for the M4 switchgear are as followings:
   1. *3000 Amp breakers: 52-1, 52-13*
   2. *2000 Amp breakers: 52-2, 52-7, 52-12*
   3. *The remaining circuit breakers are 1200 Amp.*

   The circuit breaker size for the G3A (51-13) is 2000 Amp.

5. **Question:** Damages are not specified, please provide the magnitude of liquidated damages per day or if the contractor is liable for actual damages as a result of a delay in contract completion?

   Answer: *This contract will have no liquidated damages.*

6. **Question:** In regards to the sequence of construction outlined in specification TS 01011, is it the intent of the plant's operations to relocate the individual loads one at a time or can multiple loads be removed concurrently? For example, for the replacement of M1 loads in Step 8, do the feeders for S1-1 need to be removed, re-pulled, tested and terminated before proceeding to the removal of S2 feeders or can the existing feeders for S1-1, S2, and so on be removed at the same time?

   Answer: *Basically, the Plant wants to keep the outrages of the reluctant feeders as short as possible. What are critical to the Plant are generation feeders and feeders that interconnect the M1 through M5 switchgears. Shutting down more than one feeder at the same time will be permitted if it makes the install more efficient. See the following cases. (Note: Not every case is shown).*

   CASE 1: Step 8 circuits: S1-1, S2 & S3A can be replaced at the same time. These circuits are being installed through many of the same manholes.

   CASE 2: Step 8 circuits: SWGR G1 and SWGR G2 must be installed one at a time. The Plant can not have both G1 and G2 switchgears shutdown at the same time.

   CASE 3: Step 8 circuits: S12 & S14B can be replaced at the same time. These circuits are being installed through many of the same manholes.

   CASE 4: Step 8 circuits: S15-2 and S18 can be replaced at the same time. These circuits are being installed through many of the same manholes.

7. **Question:** Most switchgear can be fed from a redundant source while M1, M2 and M3 are being replaced; however, S18 which feeds the office trailers does not have a second source. Will the contractor need to provide generator power for the trailers while the S18 feeders are being replaced?

   Answer: *For SWGR S18, the CITY will provide the generator during the shutdown.*

8. **Question:** The (E) Switchgear M3 will be demolished, and the new SWGR M3 will sit on the existing structure MH 51. The MH 51 is a buried vault, built over 40 years ago, and now needs to be modified to meet the criteria for an Essential Building and CBC2007 Code criteria. Also foundation settlement may be a problem. Please provide the as built drawings for SWGR M3 vault MH51.

Answer: *In the CD attached with the Bid Specification, the original structural drawings (6S1 & 6S2) show the details for the manhole (MH-51) at the 115KV substation. The drawings are filed in : "M3 Switchgear Drawing_Information/ Existing 115KV Substation & M3 Swgr Drawings.pdf"*

TECHNICAL SPECIFICATIONS

SECTION 16121

MEDIUM VOLTAGE CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing and installation of medium voltage (5-kV rated) cables, cable joints, terminations, connectors, cable splices and accessories.

1.2 RELATED SECTIONS

A. Section 16050 – Basic Electrical Materials and Methods

B. Section 16195 – Electrical Equipment Identification

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

The standards referenced herein, except as modified in the Contract Documents, shall have full force and effect as though included in these Specifications. These standards are not furnished to the Contactor since manufacturers and trades involved are assumed to be familiar with these requirements. The CONTRACTOR shall obtain copies of reference standards direct from publication sources as needed for proper performance and completion of the work.

A.	AEIC CS 8-07	Specification for Extruded Dielectric Shielded Power Cables Rated 5 through 46
B.	ANSI C 2	National Electrical Safety Code – latest edition
C.	ASTM B 496	Compact Round Concentric-Lay-Stranded Copper Conductors
D.	IEEE 48	Test Procedures and Requirements for High Voltage AC Cable Terminations
E.	IEEE 386	Separate Insulated Connector Systems for Power Distribution Systems above 600-Volts.
F.	IEEE 404	Cable Joints for Use with Extruded Dielectric Cable Rated 5 Through 138-kV and Cable Joints for Use with Laminated Dielectric Cables Rated 2.5 through 500-kV.
G.	IEEE 592	Exposed Semi-conduction Shields on Premolded High Voltage Cable Joints and Separable Insulated Connectors.
H.	NFPA 70	National Electrical Code – latest edition.
I.	NEMA WC-26	Binational Wire and Cable Packaging Standard
J.	NEMA WC-72	Continuity of Coating Testing for Electrical Conductors
K.	NETA ATS	National Electrical Testing Association Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
L.	UL 1072	Medium Voltage Power Cables.

M. UL 486A Wire Connectors and Soldering Lugs for Use with Copper Conductors.

N. UL 510 Polyvinyl Chloride, Polyethylene and Rubber Insulating Tapes.

1.4 DESIGN REQUIREMENTS

A. Furnish products listed and classified by Underwriters Laboratories, Inc. (UL), Electrical Testing Laboratories, Inc. (ETL), or other recognized, acceptable testing and listing agencies as suitable for the purpose specified and shown.

B. Conform to requirements of ANSI/NFPA 70 and ANSI/IEEE C2.

C. All cables shall be copper. All conductor sizes are based on copper.

1.5 CONTRACTOR SUBMITTALS

A. Product Data:
   1. Submit manufacturer's catalog cuts and technical data in sufficient detail and scope to verify compliance with the requirements of the contract documents for medium voltage cables, stress cones, connectors, splices and accessories.
   2. Submit a complete itemized list of equipment and material proposed for incorporation into this work. Each entry shall include an item number, the quantity of item proposed and the name of the manufacturer of each such item.
   3. Submit, as a minimum, installation procedures for medium-voltage cable terminations and splices.
   4. Procedures shall include cable pulling plans, diagrams, instructions, and precautions required to install, adjust, calibrate and test the devices and equipment.

B. Test Report:
   1. Factory Tests.
      a. Submit certified factory test reports for manufacturer performed routine factory tests, including tests required by standards listed in paragraph "References". Results of factory tests performed shall be certified by the manufacturer, or an approved testing laboratory, and submitted within 7 days following successful completion of the tests. The manufacturer's pass-fail criteria for tests specified in paragraph "Field Testing" shall be included.
   2. Field Testing.
      a. Submit a proposed field test plan, at least 20 days prior to testing the installed system. No field test shall be performed until the test plan is approved. The test plan shall consist of complete field test procedures including tests to be performed. Test equipment required, and tolerance limits. Submit the following:
         1) A list of equipment used, with calibration certifications.
         2) Copies of measurements taken.
         3) The dates of testing.
         4) The equipment and values to be verified.

5) The conditions specified for the test.
6) Measure overall insulation resistance to ground.
7) Indicate results of cable test in tabular form and in plots of current versus voltage for incremental voltage steps, and current versus time at 30-second intervals at maximum voltage, signed and dated.
8) Provide certified test report for CITY's Review

b. Cable Installation.
1) Site layout drawing with cable pulls numerically identified.
2) A list of equipment used, with calibration certifications.
3) The cable manufacturer and type of cable.
4) The dates of cable pull, time of the day, and ambient temperature.
5) The length of cable pull and pulling tensions.
6) The actual cable pulling tensions encountered during pull.

c. Certification.
1) Material and Equipment. Where material and equipment are specified to conform to the standards of the Underwriters Laboratory (UL) or to be constructed and/or tested in accordance with the standards of the American National Standards Institute (ANSI), the Institute of Electrical and Electronics Engineer (IEEE), or the National Electrical Manufacturers Association (NEMA), the CONTRACTOR shall submit proof that the item provided conform to such requirements. The label of, or listing by, UL will be accepted as evidence that the item conforms. Either a certification or a published catalog specification data statement, to the effect that the item is in accordance with the referenced ANSI, IEEE and/or NEMA standard, will be acceptable as evidence that the item conforms. In lieu of such certification or published data, the CONTRACTOR may submit a certificate from a nationally recognized testing agency equipped and competent to perform such services, stating that the items have been tested and that they conform to the requirements listed, including method of testing of the specified agencies.
2) Cable Joints and Splices. A certification that contains the names and the qualifications of people recommended performing the splicing and termination of medium-voltage cables approved for installation under this contract. The certification shall indicate that any person recommended to perform actual splicing and terminations has been adequately trained in the proper techniques and have had at least three recent years of experience in splicing and terminating the same or similar types of cables approved for installation. In addition, any person recommended by the CONTRACTOR may be required to perform a practice splice and termination, in the presence of the CITY, before

being approved as a qualified installer of medium-voltage cables. If that additional requirement is imposed, the CONTRACTOR shall provide short sections of the approved types of cables along with the approved type of splice and termination kits, and detailed manufacturer's instruction for the proper splicing and termination of the approved cable types.

C. Manufacturer's Instructions:
   1. Indicate application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements.
   2. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of product.

1.6 CLOSEOUT SUBMITTALS

A. Submit Factory and Field Test Reports.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years experience.

B. Installer:
   1. Company specializing in installing product specified in this section with minimum five (5) years documented experience.
   2. Cable Installer Qualifications. The CONTRACTOR shall provide at least one onsite person in a supervisory position with documented level of competency and experience to supervise all cable pulling operations. A resume shall be provided showing the cable installers' experience in the last three years, including a list of references complete with point of contact, addresses and telephone numbers.

C. Testing Firm:
   1. The testing firm shall be an independent, approved testing organization, which can function as an unbiased testing authority, professionally independent of the manufacturing, suppliers and installers of equipment or systems evaluated by the testing firm.
   2. The testing firm shall be regularly engaged in the testing of electrical equipment devices, installation and systems.
   3. The testing firm shall meet the criteria for Full Membership or be a Full Member company of the International Testing Association (NETA).
   4. The lead, on site, technical person shall be currently certified by the International Electrical Testing Association (NETA) or the National Institute for Certification in Engineering Technologies (NICET) in electrical power distribution system testing.
   5. The testing firm shall utilize technicians who are regularly employed by the firm for testing services.
   6. The testing firm shall submit proof of the above qualifications with bid documents.

1.8 QUALITY ASSURANCE

A. The terminating and testing of all the medium voltage (5-kV rated) cables shall be performed by one of the following subcontractor's:

1. Power Systems Testing Co.
   2267 Claremont Court
   Hayward, CA 94545
   Tel: (510) 783-5096 (Meets all NETA Requirements)
2. Electro-Test, Inc. Corporate Headquarters
   3470 Fostoria Way, Suite A
   San Ramon, CA 94583
   Tel: (888) 468-6384 (Meets all NETA Requirements)
3. Try Co.
   115 Ryan Industrial Court, Suite 107
   San Ramon, CA. 94583
   Tel: (925) 831-8271 (Not a member of NETA, but meet all other criteria)
4. California Splicing and Testing
   3725 Camino Diablo Road
   P.O. Box 730
   Byron, CA, 94514
   Tel: (925) 516-2382
   Fax: (925-516-7530) (Not a member of NETA, but meet all other criteria)
5. Or Equal

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle products on site in accordance with Section TS 01600 (Product Requirements).

B. Accept cable and accessories on site in manufacturer's packaging. Inspect for damage.

C. Store and protect cable and accessories from the environment in accordance with manufacturer's published instructions. Damaged items shall be replaces at no additional cost to Owner.

D. Provide adequate heating and ventilation to prevent condensation.

1.10 PROJECT CONDITIONS

A. Verify that field measurements are as shown on drawings.

B. Cable routing as shown on drawings is diagrammatic unless dimensioned. Determine exact routing and lengths required to provide a complete wiring system.

PART 2 - PRODUCTS

2.1 MEDIUM VOLTAGE CABLE

A. **Cable Description:**

Cable provided must be single conductor, 5 KV, jacketed, and insulated with a high quality, heat, moisture, impact, ozone, and corona resistant thermosetting (ethylene propylene-EPR) rubber that shall be suitable for use in wet or dry locations in conduit, underground duct systems. The cables shall be rated for 105 degrees C for normal operation, 140 degrees C emergency overload operation, and 250 degrees C short circuit conditions.

B. **Cable Rating:**

Cable shall be rated for the system circuit voltage: 5-kV, ungrounded, 133% insulation level

C. **Cable Withstand Voltage Ratings:**

As recommended in NETA ATS Table 10.6 for 15 minutes.

D. **Conductor:**

The conductor shall be Class B Uncoated Compact Round Copper, covered with an extruded semi conducting screen in accordance with ASTM B-496, AEIC CS 8 and UL-1072.

E. **Conductor Shield:**

The conductor shield shall be extruded semi conducting material compatible with the conductor and overlying insulation material and meeting AEIC CS 8 and UL-1072. The shield shall be bonded to the insulation and strip freely from the conductor

F. **Insulation:**

The insulation shall be 133 percent insulation level, 5 kv, ethylene propylene rubber (EPR) in accordance with NEMA WC 72 and AEIC CS 8. The minimum average insulation thickness shall be 115 mils.

G. **Insulation Shield:**

The insulation shield shall be an extruded semi-conducting compound compatible with insulation in accordance with AEIC CS 8, with a volume resistivity not in excess of 100 ohm-meters at 105 degrees C when tested per AEIC CS8. The insulation shield shall be in intimate contact with the insulation, but shall be removable without damaging the insulation; leaving no residue that cannot be

readily removed

H. **Shielding:**

Bare 5 mil copper tape helically applied with a minimum of 12.5% overlap. The tape shall be electrically continuous without joints, soldering, or brazing.

I. **Jacket:**

The overall jacket shall be extruded black PVC (Polyvinyl-Chloride) applied over the metallic shield in accordance with ICEA S-96-659/NEMA WC 74 and UL-1072. The jacket shall be free stripping from the shielding tape.

J. **Cable Identification:**

The following information shall be indicated, by means of a surface legend printed in compatible ink of contrasting color, at intervals not to exceed 24 inches over the entire length of the cable:

1. Manufacturer's name.
2. Conductor material.
3. Conductor size.
4. Maximum rated voltage.
5. Insulation material.
6. Letter designating cable type.
7. Shielded or non-shielded.
8. Date of manufacture.

K. **Testing:**

Each cable length shall be tested and inspected each cable reel according to AEIC CS8-07 before shipping. Each length of completed cable shall be tested for conductor and shield continuity. Testing of the cable shall include, but limited to the following:

1. Ensure that the cable is tested at the manufacturer's facility prior to shipping.
2. The partial discharge test shall be performed in accordance with AEIC CS-8, shall be included with the certified test reports clearly showing the corona test results for each identified length of cable.
3. A hot impulse test, performed in accordance with AEIC CS-8, shall be made on representative samplings of the cable supplied under this specification. Complete documentation of the results shall be included in the final test report package.
4. Provide certified test reports to the CITY within two (2) working weeks after the completion of the testing program. Furnish in accordance with AEIC CS-8.

5. The CITY reserves the right to witness the cable tests at the manufacturer's facility. Notify the CITY of the impending tests at least 10 working days prior to the tests.
6. Inasmuch as the requirements of AEIC CS-8 form a part of this specification, written verification of the testing procedures performed during production shall be required of the Seller prior to factory acceptance of the cable purchased under this specification.

L. **Manufacturer:**

Medium voltage cables shall be the standard product of a manufacturer regularly engaged in the manufacture of the product and shall essentially duplicate items that have been in satisfactory use for at least 3 years prior to bid opening. Medium-voltage cables as manufactured by the following companies are acceptable.

1. BICC Brand-Rex Company.
2. Pirelli Cable Corp.; Power Cable Division.
3. Southwire Company
4. The Kerite Company
5. The Okonite Company

M. **Warranty:**

The cable shall have a 40-year design life.

2.2 CABLE JOINTS, TERMINATIONS, AND CONNECTORS

A. **Medium-Voltage Cable Joints:**

1. Medium-voltage cable joints shall comply with IEEE Std. 404 and 592.
2. Joints shall be the standard products of a manufacturer and shall be either of the factory preformed type or of the kit type containing tapes and other required parts. Joints shall have ratings not less than the rating of the cables on which they are installed.
3. Splice kits may be of the heat-shrinkable type for voltages up to 15-kV, of the pre-molded splice and connect type, and conventional taped type, or the resin pressure-filled overcast taped type for voltages up to 35-kV; except that for voltages of 7.5-kV or less a resin pressure-filled type utilizing a plastic-tape mold is acceptable.
4. Joints used in manholes, handholes, vaults and pull boxes, shall be certified by the manufacturer for waterproof, submersible application.

B. **Medium Voltage Separable Insulated Connectors:**

1. Separable insulated connectors shall comply with IEEE Std. 386 and IEEE Std. 592 and shall be of suitable construction or standard splice kits shall be used.
2. Separable insulated connectors are acceptable for voltages up to 35-kV.

3. Connectors shall be of the load break type as indicated, of suitable construction for the application and the type of cable connected, and shall include cable shield adaptors.
4. Separable insulated connectors shall not be used as substitutes for conventional permanent splices.
5. External clamping points and test points shall be provided.

C. **Terminations:**
1. Medium-voltage cable terminations shall comply with IEEE Std. 48 Class 1 or Class 2, of the molded elastomer, wet-process porcelain. Pre-stretched elastomer, heat-shrinkable elastomer, or taped type.
2. Acceptable elastomers are track-resistant silicone rubber or track-resistant ethylene propylene compounds, such as ethylene propylene rubber.
3. Separable insulated connectors may be used for apparatus terminations, when such apparatus is provided with suitable bushings.
4. Terminations shall be of the outdoor type unless indicate otherwise.
5. Indoor, class 2 terminations are acceptable where installed inside outdoor equipment housings that are sealed against normal infiltration of moisture and outdoor air.
6. Class 3 terminations are not acceptable.
7. Terminations, where required, shall be provided with mounting brackets suitable for the intended installation and with grounding provisions for the cable shielding, metallic sheath, and armor.

D. **Factory Preformed Type:**
1. Molded elastomer, wet-process porcelain, pre-stretched, and heat shrinkable terminations shall utilize factory preformed components to the maximum extent practicable rather than tape build-up.
2. Terminations shall have basic impulse levels as required for the system voltage level.
3. Leakage distance shall comply with wet withstand voltage test requirements of IEEE Std. 48 for the next higher Basic Impulse Level (BIL).
4. Anti-tracking tape shall be applied over exposed insulation of preformed molded elastomer terminations.

E. **Taped Terminations:**
1. Taped termination shall be standard termination kits providing terminal connectors, field fabricated stress cones, and rain hoods.

2.3 CABLE TERMINATIONS

A. Manufacturers: The following manufacturers and their products are acceptable:
1. 3M (No. 5633K, with 3M No. 31145 long-barrel lugs, two-hole for NEMA standard pattern)
2. Tyco Electronics (No. HVT-152-SG Kit, with HVS-EG External Grounding/Shield Interrupting Kit and T&B No. 54479 long-barrel lugs, two-hole for NEMA standard pattern)
3. Kerite (IT-5-SPMT Terminating Kit, with T&B No. 54479 long-barrel lugs, two-hole for NEMA standard pattern)

4. Or equal.

2.4 CABLE SPLICES

A. Manufacturers: The following manufacturers and their products are acceptable:
   1. 3M (No. 5502-CI-4/0 for inline splices, No. 5719 for Tee splices)
   2. Kerite (S-5-SPMT Splice Kit, with T&B No. 54012 splicer)
   3. Tyco Electronics (No. HVS-823S, with HVS-EG External Grounding/Shield Interrupting Kit and T&B No. 54012 Splicer)
   4. Or equal.

2.5 DELIVERY AND INSPECTION

A. Submit guaranteed quantity delivery schedules with the bid proposal.

B. Seller shall inspect the cable with the installation sub-contractor prior to installation and shall perform the necessary tests to verify that the cable meets the characteristics and performance parameters as tested at the manufacturer's facility prior to shipment to the job site.

C. CITY reserves the right to inspect and/or test the cable independently to verify compliance with this specification. Any repairs or replacement of the cable necessary to attain compliance with this specification shall be at the Seller's expense.

D. Packing, Sealing and Shipping
   1. Place the cable on the reels so that it will be protected from damage during shipment. Firmly and properly secure each end of the cable to the reel. Take precautions to prevent the loosening of reeled cable.
   2. Prevent the ingress of moisture into the cable prior to shipping. Durably seal each end of the cable prior to shipment to prevent the ingress of moisture during shipment and later storage. If the conductor exhibits signs of slight corrosion but no pitting, Seller shall verify that cable was properly dried and retested prior to shipping, at no additional cost to the City.
   3. Ship each identified length of cable on a separate reel.
   4. Lag or otherwise suitably cover the reel(s) with suitable material to provide physical protection for the cable(s) during transit and ordinary storage and handling operations.

E. Reels
   1. The minimum diameter of the drum of the shipping reel shall be at least that prescribed in NEMA WC-26.
   2. Protect the inner or drum end of the reel to avoid damage to the cable or environmental end seal.
   3. Markings: Each reel shall have a legend stating: "DO NOT LAY FLAT"
   4. Manufacturer's name
   5. Reel number per purchase order
   6. Length of cable on reel
   7. Type cable, size, rating, and year of manufacture

8. Purchase order number
9. Delivery address as specified in purchase order

2.6 INSTALLATION SUPPORT SERVICES

A. Manufacturer shall submit recommendations for maximum pulling tensions and sidewall pressures to the CITY for review upon delivery of cable to job site. Provide these at no extra cost.

B. CONTRACTOR shall provide a qualified cable installer. CITY to witness the cable installation. This person(s) shall be responsible for verifying that the cable is installed within the manufacturer's recommended tolerances for installation limits. Provide these services as a part of the bid proposal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that raceway system is installed and ready to receive cable.

B. Pull an appropriately sized conduit mandrel completely through the installed duct(s) to ensure that duct is suitable for pulling intended cables without damage.

C. Beginning of installation means installer accepts existing conditions.

3.2 PREPARATION

A. Use a lubricated swab behind a mandrel to clean conduits and ducts before pulling cables.

B. Install new or relocated existing cable racks with fiber glass cable supports in manholes, vaults, or pull boxes as necessary to support cables.

C. Coordinate the installation of the cables under this specification with the CITY.

3.3 INSTALLATION

A. Install cables, terminations and splices in accordance with manufacturer's instructions and ANSI/IEEE C2.

B. Avoid abrasion and other damage to cables during installation.

C. Use suitable lubricants and pulling equipment. Do not exceed cable pulling tensions nor bending radius restrictions.

D. Ground cable shield at each termination and/or splice.

E. Install cables in manholes along wall providing longest route. Arrange cables in manholes to avoid interference with duct entrances.

F. Provide at least one full 360-degree coil wrapped around the interior of the manhole from entrance to exit, racked appropriately, to allow for splicing, tapping and/or cable movement.

G. Install the three cables of a three-phase circuit in a triangular configuration on the on the fiber glass cable supports rack. Securely bind the cables (use black plastic ties) at each rack to secure them in place.

H. Identify all cables in accessible locations in accordance with Section 16195 (Electrical Equipment Identification).

3.4 PROTECTION

A. Protect installed cables from entrance of moisture..

B. Do not handle with mechanized equipment such that the lifting forks will come into contact with the cable or that the weight of the cable/reel will rest on the lifting forks or any other handling medium.

C. During the installation process, protect the cable jacket from abrasion or scuffing damage by the use of suitable cable pulling equipment.

3.5 FIELD QUALITY CONTROL

A. Field inspection and test shall be performed under provisions of NETA ATS section 7.3 (3) – Medium Voltage Cables, as follows.

B. Visual and Mechanical Inspection
   1. Compare cable data with drawings and specifications
   2. Inspect exposed sections of cable for physical damage,
   3. Inspect all bolted electrical connections for high resistance using one of the following methods:
      a. Use of low-resistance ohmmeter in accordance with NETA Section 7.3.3.2 (Electrical Tests).
      b. Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 10.12.
   4. Inspect compression-applied connectors for correct cable match and indention.
   5. Inspect for shield grounding, cable support, and termination.
   6. Verify that visible cable bends meet or exceed ICEA and/or manufacturer's minimum allowable bending radius.
   7. Inspect fireproofing in common cable areas, if specified.
   8. If cables are terminated through window-type current transformers, make an inspection to verify that neutral and ground conductors are correctly placed and that shields are correctly terminated for operation of protective devices.
   9. Inspect condition of cable jacket and insulation
   10. Inspect cable for correct identification, arrangement and connections.

C. Electrical Tests
   1. Perform a shield-continuity test on each power cable by ohmmeter method.
   2. Perform an insulation-resistance test utilizing a meg-ohmmeter with a voltage output of at least 2,500 volts. Individually test each conductor with all other conductors and shields grounded. Test duration shall be one minute.
   3. Perform resistance measurements through all bolted connections with low-resistance ohmmeter.

4. Perform a dc high-potential test on all cables. Adhere to all precautions and limits as specified in the applicable NEMA/ICEA Standard for the specific cable. Perform tests in accordance with ANSI/IEEE Standard 400. Test procedure shall be as follows, and the results for each cable test shall be recorded as specified herein. Test voltages shall not exceed 80 percent of cable manufacturer's factory test value or the maximum test voltage in NECA ATS Table 10.6.
   a. Insure that the input voltage to the test set is regulated.
   b. Current-sensing circuits in test equipment shall measure only the leakage current associated with the cable under test and shall not include internal leakage of the test equipment.
   c. Record wet- and dry-bulb temperatures or relative humidity and temperature.
   d. Test each section of cable individually.
   e. Individually test each conductor with all other conductors grounded. Ground all shields.
   f. Terminations shall be adequately corona-suppressed by guard ring, field reduction sphere, or other suitable methods as necessary.
   g. Insure that the maximum test voltage does not exceed the limits for terminators specified in ANSI/IEEE Standard 48, IEEE 386, or manufacturer's specifications.
   h. Apply a dc high-potential test in at least five equal increments until maximum test voltage is reached. No increment shall exceed the voltage rating of the cable. Record dc leakage current at each step after a constant stabilization time consistent with system charging current.
   i. Raise the conductor to the specified maximum test voltage and hold for 15 minutes on shielded cable and five minutes on non-shielded cable. Record readings of leakage current at 30 seconds and one minute and at one-minute intervals thereafter.
   j. Reduce the conductor test potential to zero and measure residual voltage at discrete intervals.
   k. Apply grounds for a time period adequate to drain all insulation stored charge.
   l. When new cables are spliced into existing cables, the dc high-potential test shall be performed on new cable prior to splicing in. The existing cable shall be tested using a VLF (Very Low Frequency AC Hipot Tester) and not exceeding 60 percent of the factory test value. After test results are approved for both the existing and new cable and the splice is completed, an insulation-resistance test and a shield-continuity test shall be performed on the length of existing and new cable including the splice. After a satisfactory insulation-resistance test, a VLF test shall be performed on the cable utilizing a test voltage acceptable to owner and not exceeding 60 percent of factory test value.

D. Test Values
   1. Compare bolted connection resistance to values of similar connections.

2. Bolt-torque levels should be in accordance with NETA Table 10.12 unless otherwise specified by manufacturer.
3. Micro-ohm or milli-volt drop values shall not exceed the high levels of the normal range as indicated in the manufacturer's published data. If manufacturer's data is not available, investigate any values which deviate from similar connections by more than 50 percent of the lowest value.
4. Shielding shall exhibit continuity. Investigate resistance values in excess of ten (10) ohms per 1,000 feet of cable.
5. Graphic plots shall be made of leakage current versus step voltage at each increment and leakage current versus time at final test voltages.
   a. The step voltage slope should be reasonably linear.
   b. Capacitive and absorption current should decrease continually until steady state leakage is approached.

E. Documentation
1. Provide five (5) bound, tabbed, and indexed sets of all operation and maintenance manuals, submittal specification sheets, installation procedures and drawings, manufacturer's test results and warranty information, and installation Subcontractor's test instrument calibration documentation. Submit to CITY after final acceptance of Work-In-Place.

NETA ATS TABLE 10.6
Medium-Voltage Cables
Maximum Field Acceptance Test Voltages (kV, DC)

Insulation Type	Rated Cable Voltage	Insulation Level	Test Voltage kV, dc
Elastomer: Ethylene Propylene Rubber (EPR)	5 kV	133%	25

Derived from ANSI/IEEE Standard 141-1993 Table 12-9 and by factoring the applicable ICEA/NEMA Standards.

NOTE: AEIC CS5 and CS8, and ANSI/IEEE Standard 400 do not differentiate cables based upon insulation thickness and, consequently, list differing test voltages.
Insure that the maximum test voltage does not exceed the voltage limits for potheads and terminators specified in IEEE Std. 48 (*IEEE Standard Test Procedures and Requirements for High-Voltage AC Cable Terminations*) or for molded rubber terminations specified in IEEE Std. 386 (*IEEE Standard for Separable Insulated Connector Systems for Power Distribution systems Above 600V*), or manufacturer's published data.

NETA ATS 1999 - TABLE 10.12
US Standard Bolt Torques for Bus Connections
Heat-Treated Steel - Cadmium or Zinc Plated

Grade	SAE 1&2	SAE 5	SAE 7	SAE 8
Head Marking				
Minimum Tensile (PSI)	64K	105K	133K	150K
Bolt Diameter in Inches	Torque (Foot Pounds)			
¼	4.0	5.6	8.0	8.4
5/16	7.2	11.2	15.2	17.6
3/8	12.0	20.0	27.2	29.6
7/16	19.2	32.0	44.0	48.0
½	29.6	48.0	68.0	73.6
9/16	42.4	70.4	96.0	105.6
5/8	59.2	96.0	133.6	144.0
¾	96.0	160.0	224.0	236.8
7/8	152.0	241.6	352.0	378.4
1.0	225.6	372.8	528.0	571.2

NETA ATS 1999 - TABLE 10.12
Bolt Torques for Bus Connections
Silicon Bronze Fasteners[1]
Torque (Foot Pounds)

Bolt Diameter in Inches	Non-lubricated	Lubricated
5/16	15	10
3/8	20	14
½	40	25
5/8	55	40
¾	70	60

[1] Bronze alloy bolts shall have a minimum tensile strength of 70,000 pounds per square inch.

Aluminum Alloy Fasteners[2]
Torque (Foot Pounds)

Bolt Diameter in Inches	Lubricated
5/16	8.0
3/8	11.2
½	20.0
5/8	32.0
¾	48.0

[2] Aluminum alloy bolts shall have a minimum tensile strength of 55,000 pounds per square inch.

Bolt Torques for Bus Connections
Stainless Steel Fasteners[3]
Torque (Foot Pounds)

Bolt Diameter in Inches	Uncoated
5/16	14
3/8	25
½	45
5/8	60
¾	90

[3] Bolts, cap screws, nuts, flat washers, locknuts: 18-8 alloy. Belleville washers: 302 alloy.

END OF SECTION

MMC

MAY 0 4 2010

CONTRACTS

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Environmental Services Department
SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT

April 30, 2010

ADDENDUM NO. 2
TO
THE PLANS AND SPECIFICATIONS
FOR
SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT

Notice is hereby given that the following revisions, additions and/or deletions are hereby made of, and incorporated into the Plans and Specifications for the **SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT**

IMPORTANT

THIS ADDENDUM MUST BE ACKNOWLEDGED WHEN YOUR BID IS SUBMITTED. FAILURE TO ACKNOWLEDGE THE ADDENDUM MAY CONSTITUTE GROUNDS FOR REJECTION OF THE BID.

INSTRUCTIONS:

This Addendum No. 2, pages 1 through 5, and attachments modifies the Bidding Documents for the SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT, and shall become part of the Contract Documents for this Project.

The Contract Time is not changed

Submit this Addendum #2 package with your bid proposal.
The bidder must sign this addendum in the space provided below and return one signed copy with the bid. Failure to return the signed copy with the bid document shall not relieve the bidder of the obligation to include this addendum in the bid proposal.

Monterey Mechanical Co.
Bidder's Name

Milton C. Burleson
President & CEO
Signature and Title of Bidder

5/13/10
Date

Approved by:

Bhavani Yerrapotu, P.E.
Division Manager, Technical Support Services
SJ/SC Water Pollution Control Plant

THIS ADDENDUM CONTAINS FIVE (5) PAGES

ADDENDUM NO. 2

TO

PLANS AND SPECIFICATIONS

FOR

SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT

April 30, 2010

REQUESTS FOR INFORMATION

Reference Drawing 58S2001 (S-103)
EXISTING MH-51 VAULT STRUCTURAL PLAN

The notes in sections A and B in the above noted drawing calls for modification of the existing vault to meet CBC 2007 code requirement for Building Occupancy Cat IV Essential Facility. It also requires a geotechnical study to include effects of long term settlements for up to 5 years.

1. **Question:** Are any existing structural drawings and construction specification for MH51 available, excepting drawing no. 6S1? Drawing 6S1 refers to drawings 6S2.

   Response: *No other drawings or specifications for the MH51 are available. Copies of the existing structural drawings for MH51 (6S1 and 6S2) were included in the CD attached to bidder's specification.*

2. **Question:** The existing vault MH51 was probably constructed over 40 years ago, and most likely long term settlement has already taken place for this vault. Do you have any record of settlement for this structure since it was built, or any documented measures for settlement mitigation for this vault structure?

   Response: *No records of settlement have been taken at MH51.*

3. **Question:** Is there any settlement criteria for the modified vault for SWGR M3? We note criteria noted in note 11, SWGR M1 Grading Plan drawing No 91C2003(C-103). Can we assume that similar criteria will apply?

   Response: *The assumption that should be made is that settlement will not be an issue at MH51.*

4. **Question:** The specifications do not mention arc proof taping of the cable installed in the manholes; however, during the pre-bid job it appeared that most of the conductors were covered with arc protective tape. Is this taping required for the new circuit conductors being installed?

   Response: *Provide Fireproofing (Arc Proofing) for individual cable conductor in manholes, handholes and vaults which will carry current at 5kv .*

   Tightly wrap strips of fireproofing tape around each cable spirally in half-lapped wrapping. The tape shall extend 1 inch into the ducts. To prevent unraveling, random wrap the fireproofing tape the entire length of the fireproofing with pressure-sensitive glass cloth tape.

5. **Question:** Will the City allow the Contractor to discharge water pumped out of the electrical vaults and manholes into the City's sewer system or will the Contractor be required to provide other means of disposal offsite?

Response: *The water pumped out of electrical vaults and manholes can be discharged to the Plant's sewer system. If the discharge has any material in it, it should be screened before going into the Plant's sewer system.*

6. **Question:** Will the contractor be responsible for the control terminations in the 115KV relay panels supplied by Others? If so, will the information be provided by Others or the City as well?

   Response: *The Plant electricians will terminate the cables at the 115 KV relay and SCADA panels and also at the 115 KV step-up transformers and circuit switchers. The contractor will pull the cables to the devices. The City will develop the detail drawings identifying the connections required at a later date. At this time, Contractor quote to provide the miscellaneous control cables identified in the Medium Voltage Metal-Clad Switchgear Specification: 16341 Section 2.11.*

7. **Question:** Are the exposed bolted connections and connecting bussing at each feeder termination required to be taped with insulating tape?

   Response: *It would be preferred that the exposed bolted connections and connection bussing at each feeder at each feeder termination be covered with preformed PVC boots held together with nylon hardware for easy installation and removal during servicing. Tapping the joints with the factory's recommended insulation taping is acceptable.*

8. **Question:** Part 2, 2.1, A, 4 - The list of cable manufacturers includes USA Wire & Cable which is a distributor of cable not a manufacturer of cable. Hence, they should not be qualified as a provider.

   Response: *The Medium Voltage Cables Specification Section 16121 was modified in Addendum 1 with TS-16121 - Medium Voltage Cables - IFQ 100402_042410.pdf. Section Part 2, 2.1, A, 4 was removed.*

9. **Question:** Part 2, 2.1, A, 4 - The list of cable manufacturers does not state "or equal." Will "or equal" products that meet the spec be allowed?

   Response: *The Medium Voltage Cables Specification Section 16121 was modified in Addendum 1 with TS-16121 - Medium Voltage Cables - IFQ 100402_042410.pdf. Part 2, 2.1, A, 4 was replaced with Part 2 2.1.L. In the new specification, the Part 2 2.1.L should include "or equal" manufacturers whose products meet the specification.*

10. **Question:** Part 2, 2.1, G, 6 - Triple tandem extrusion is most common when producing ethylene propylene rubber (EPR) insulated cable. When manufacturers insulate with cross-linked polyethylene (XLP), current manufacturing methods use both triple tandem and "true" triple extruding processes. Would both methods be acceptable?

Response: *The Medium Voltage Cables Specification Section 16121 was modified in Addendum 1 with TS-16121 - Medium Voltage Cables - IFQ 100402_042410.pdf. Section Part 2, 2.1, G, 6 was removed.*

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Environmental Services Department
SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT

May 7, 2010

ADDENDUM NO. 3
TO
THE PLANS AND SPECIFICATIONS
FOR
SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT

Notice is hereby given that the following revisions, additions and/or deletions are hereby made of, and incorporated into the Plans and Specifications for the **SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT**

IMPORTANT

THIS ADDENDUM MUST BE ACKNOWLEDGED WHEN YOUR BID IS SUBMITTED. FAILURE TO ACKNOWLEDGE THE ADDENDUM MAY CONSTITUTE GROUNDS FOR REJECTION OF THE BID.

INSTRUCTIONS:

This Addendum No. 3, pages 1 through 5, modifies the Bidding Documents for the SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT, and shall become part of the Contract Documents for this Project.

The Contract Time is not changed

Submit this Addendum #3 package with your bid proposal.
The bidder must sign this addendum in the space provided below and return one signed copy with the bid. Failure to return the signed copy with the bid document shall not relieve the bidder of the obligation to include this addendum in the bid proposal.

Monterey Mechanical Co.
Bidder's Name

Milton C. Burleson
President & CEO
Signature and Title of Bidder

5/13/10
Date

Approved by:

Bhavani Yerrapotu, P.E.
Division Manager, Technical Support Services
SJ/SC Water Pollution Control Plant

THIS ADDENDUM CONTAINS FIVE (5) PAGES

ADDENDUM NO. 3

TO

PLANS AND SPECIFICATIONS

FOR

SWITCHGEAR M1, M2 & M3 REPLACEMENT DESIGN-BUILD PROJECT

May 7, 2010

REQUESTS FOR INFORMATION

1. **Question:** Please refer to Spec. Section 16341-2, 1.5:

   1.5 MANUFACTURER QUALIFICATIONS
   A. Firm with at least 5 years experience in manufacturing switchgear. The manufacturer of the switchgear assembly shall also manufacture the medium voltage circuit breakers.
   I would like to submit Myers Power Products (MPP), who is an OEM and does not manufacture circuit breakers, to be pre-qualified to bid this project. I have attached the following information: MPP's product information on their Medium and Low Voltage Switchgear, their Profile Statement and their Contact Reference List for your consideration.

   Response: *Per the project special provisions these documents are required to be submitted by the Contractor during the submittal stage. City will not review nor accept these pre-qualification documents prior to award of contract.*
   Spec. Section 16341-1.5 requires 5 years experience in manufacturing switchgear and the manufacturer of the switchgear assembly shall also manufacture the medium voltage circuit breakers.

2. **Question:** Spec 16341 - 1.5.A. says manufacturer of switchgear must be same as manufacturer of med. volt circuit breakers. 16341 - 2.1.A.5 says or equal. Will you accept Myers Power Products as an equal? They have been in business over 35 years and build their switchgear using one of the MV CB mfr's listed.
   www.myerspowerproducts.com/mvswitchgear/index.htm
   (you listed Powell Industries as a manufacturer, but I do not think they manufacturer the MV circuit breakers.)

   Response: *Myers Power Products is a fabricator of Medium Voltage Switchgear. Myers Power Products fabricates switchgear assembly with third party medium voltage circuit breakers. They are not a manufacturer of medium voltage circuit breaker. Spec. Section 16341-1.5 requires 5 years experience in manufacturing switchgear and the manufacturer of the switchgear assembly shall also manufacture the medium voltage circuit breakers.*

   Powell Industries is licensed by General Electric to manufacture GE medium voltage Power/Vac circuit breakers and switchgear assemblies in their Houston, Texas plant

3. **Question:** With regards to Technical Specification Section 16121 (Medium Voltage Cables), 4/24/2010 in 3.3 INSTALLATION:
   Please clarify whether or not the cable needs to be installed along the wall providing the longest route as specified in 3.3 E below or if all cables need to have one 360 degree coil wrapped around the interior of the manhole as specified in 3.3 F below.

   E. Install cables in manholes along wall providing longest route. Arrange cables in manholes to avoid interference with duct entrances.
   F. Provide at least one full 360-degree coil wrapped around the interior of the manhole from entrance to exit, racked appropriately, to allow for splicing, tapping and/or cable movement.

Response: *5KV Cables installed in manholes and cable vaults shall meet the requirements of only 3.3.E.*

4. **Question:** Please refer to C-102 Site Notes 11 and 25.
   They indicate the PCC pavement shall be designed to meet H-20 loading.
   1. What type of vehicles will be using these surfaces?
   2. How often are the vehicles to be on this surfaces?

   Response: *The PCC pavement is for use by maintenance vehicles inside the Water Treatment Plant e.g. trucks, cranes, fork lifts etc. No information available on the frequency of use of this pavement surface.*

5. **Question:** Will a topographic survey of the site be available before the design stage of the project begins?

   Response: *Conducting a topographic survey is part of the design build contract. Contractor shall include this work as part of their bid.*

6. **Question:** Section 1.02.A provides that Contractor may be responsible for certain monetary fines if the plant's operations are impaired. We assume by impairment Owner means that the project is late. In response to question 5, Owner advised that the Contract will not include liquidated damages. Contractor requests clarification as to the type, if any, of Owner damages for which the Contractor may be responsible for unexcused Contractor-caused delay in late completion. Please clarify the environmental damage and/or fines for which Contractor may be responsible, including any other damages for impairment to the plant's operations.

   Response: *Impairment referred in Section 01011, Part 1.02A refers to the conditions set forth in the National Pollution Discharge Elimination System Permit for the San Jose Santa Clara Water Pollution Control Plant and monetary fines are determined by the California Water Quality Control Board on a case by case basis and will be imposed to the City. This project involves working with electrical power feeds to various waste water treatment processes through out the Plant. This project also involves excavation or trenching that may expose process piping. Contractor is required to work in a manner that will not impair the operational capabilities of the essential treatment process of the plant. Contractor shall be liable for impairing operational capabilities of the treatment plant caused by any negligent acts on their part.*

7. **Question:** In Specification 16341 "Medium Voltage Metal Clad Switchgear" Section 2.2A, it references an impedance grounded system. What type of impedance grounding is the existing grounding system used at the utility service and at the emergency generators (SWGR G3/G3A)?
   Response: *The 4.16 KV system at the Plant has two types of impedance grounds:*
   - *At each of the existing four transformers connected to the 115 KV system has 1000 amps grounding resistor at 4.16 KV neutral. Between zero or two transformers will be connected on the 4.16 KV grid at any one time.*

Response: *5KV Cables installed in manholes and cable vaults shall meet the requirements of only 3.3.E.*

4. **Question:** Please refer to C-102 Site Notes 11 and 25.
   They indicate the PCC pavement shall be designed to meet H-20 loading.
   1. What type of vehicles will be using these surfaces?
   2. How often are the vehicles to be on this surfaces?

   Response: *The PCC pavement is for use by maintenance vehicles inside the Water Treatment Plant e.g. trucks, cranes, fork lifts etc. No information available on the frequency of use of this pavement surface.*

5. **Question:** Will a topographic survey of the site be available before the design stage of the project begins?

   Response: *Conducting a topographic survey is part of the design build contract. Contractor shall include this work as part of their bid.*

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   Response: *Impairment referred in Section 01011, Part 1.02A refers to the conditions set forth in the National Pollution Discharge Elimination System Permit for the San Jose Santa Clara Water Pollution Control Plant and monetary fines are determined by the California Water Quality Control Board on a case by case basis and will be imposed to the City. This project involves working with electrical power feeds to various waste water treatment processes through out the Plant. This project also involves excavation or trenching that may expose process piping. Contractor is required to work in a manner that will not impair the operational capabilities of the essential treatment process of the plant. Contractor shall be liable for impairing operational capabilities of the treatment plant caused by any negligent acts on their part.*

7. **Question:** In Specification 16341 "Medium Voltage Metal Clad Switchgear" Section 2.2A, it references an impedance grounded system. What type of impedance grounding is the existing grounding system used at the utility service and at the emergency generators (SWGR G3/G3A)?
   Response: *The 4.16 KV system at the Plant has two types of impedance grounds:*
   - *At each of the existing four transformers connected to the 115 KV system has 1000 amps grounding resistor at 4.16 KV neutral. Between zero or two transformers will be connected on the 4.16 KV grid at any one time.*

- *At each of the existing eight 4.16 KV generators, the neutral is tied to ground with a 600 amp grounding resistor. Between zero or eight generators will be connected on the 4.16 KV grid at any one time.*

8. **Question:** Drawing E-701 shows conduits P-001, P-002, and P-003 become spares but their construction notes indicate they have conductor fills. Are the notes meant to say "Remove conductors" instead of "Remove and replace conductors"?

   Response: *Circuit ID P-001: The existing cables between SWGR G1 (52-1) and SWGR S1 (52-8) via MH-13B and MH-13C are being removed. New cables (P-101) will be installed between SWGR G1 (52-1) and new M1 (52-103B) via MH-13B, MH-13C, MH-13, MH-12, MH-21 and Cable Vault M1.*
   Circuit ID P-002: The existing cables between SWGR G2 (52-1) and SWGR S1 (52-9) via MH-13B and MH-13C are being removed. New cables (P-101) will be installed between SWGR G2 (52-1) and new M1 (52-206B) via MH-13B, MH-13C, MH-13, MH-12, MH-21 and Cable Vault M1.
   Circuit ID P-003: The existing cables between SWGR S8 (FU-1) and SWGR S9 (FU-1) are being removed. New cables (P-201) will be installed between SWGR S8 (FU-1) and SWGR S9 (FU-1) utilizing the existing conduits and manholes.

9. **Question**: In drawing E-101, conduits running from (E) MH-22 to (N) M1 SWGR are called out as P-102, P-106, and F-301 with key note (1) beside. Does this note refer to these conduit tags or should we include (2) new 6" conduits in addition to the tags shown?
   If the note 1 refers to the conduit tags shown, according to conduit schedule E-702 P-102 has (1) new 5", P-106 has (3) new 5", and F-301 has (1) new 2" so there are total of (4) 5" and (1) 2" in lieu of (2) 6". Please clarify.
   The same conduit run in drawing E-105 has note 10 which states (4) new 6" spare conduits to be installed. Please clarify if there are (4) new 6" conduits per dwg. E-105 or (2) new 6" conduits per dwg E-101?

   Response: *The new electrical duct bank between MH-22 and the new M1 Cable Vault will required the following:*
   - *P-102: Will require one (1) new 6" conduit. Note: The P-100 Series Tabulation on drawing E-702 for P-102 Routing Order "A" incorrectly indicates a 5" new conduit. This new conduit should be changed to one new 6" conduit.*
   - *P-106: Will require three (3) new 6" conduits. Note: The P-100 Series Tabulation on drawing E-702 for P-102 Routing Order "A" incorrectly indicates three 5" new conduits. This new conduit should be changed to three new 6" conduits.*
   - *F-301: Will require one new 2" conduit See drawing E-707.*
   - *The key note (1) on drawing E101 requires two new spare 6" conduits in addition to the new conduits required in P-102, P-106 and F-301.*

   In summary, the new electrical duct bank between MH-22 and the new M1 Cable Vault will require six (6) new 6" conduits and one (1) new 2" conduit. Beyond MH-22, the new circuits will be routed through the existing conduits that are available.